

plurality of pipes being able to be connected to a cooling medium; and

a high-frequency oscillation circuit having an induction coil, said induction coil being wrapped around said channel such that winding segments extend along side walls of said channel.

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16. The device according to claim 15, wherein said U shape has ends, and wherein the ends of the U-shape are joined together in a conducting manner for purposes of forming a short-circuit bridge.

17. The device according to claim 15, wherein said channel is thermally insulated in an upper space of a furnace.

18. The device according to claim 15, further comprising an additional heating unit in an upper furnace space.

19. The device according to claim 18, wherein the additional heating unit is configured and arranged to act directly on a surface of a melt.

20. The device according to claim 18, further comprising a ceramic plate that is heated by said additional heating unit and gives off heat to a surface of a melt between said additional

heating device and the surface of said melt.

21. The device according to claim 15, further comprising a plurality of flat coils connected one behind the other and assigned to said channel.

22. The device according to claim 21, further comprising an additional heating unit provided between transition regions of individual coils.

23. A process for melting and refining of glasses or glass ceramics with the use of a device according to claim 15, wherein a gas/air or gas/oxygen ratio of said additional heating unit is adjusted to produce a reducing atmosphere, so that a redox ratio of polyvalent ions lies on a reduced side.

24. The method according to claim 23, further comprising a  $\text{Fe}^{3+}/\text{Fe}^{2+}$  ratio that is extensively shifted to a reduced form  $(\text{Fe}^{2+})$ .

25. The method according to claim 23, wherein the glass includes phosphate or fluorophosphate glass.

26. The method according to claim 23, further comprising a